Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

1. (Currently Amended) ~~Method~~A method for calibrating a vectorial network analyser having n measurement ports and at least 2n measurement locations (n>1) by successive measurement of the reflection and transmission parameters at k = sum (n-i) for (i = 1, 2, ..., n-1) or n-1 different two-port calibration standards, which are connected between the measurement ports in any desired order and must all have a transmission path, and three different n-port calibration standards, which are connected between the measurement ports in any desired order and are permitted to have no transmission, by mathematical determination of error coefficients of the network analyser with the 10-term method in the k-fold application and measured two-port calibration standards and by mathematical determination of the scattering matrix [S_x], in which the errors are corrected, with the 10-term method ~~characterized in that~~ wherein

a) the first k calibration measurements are carried out at a two-port, which is realized by means of the direct connection of the measurement ports (through connection, T = Thru) or a short matched line (L = Line) of known length and attenuation, and which is connected between each of the k possible measurement port ~~combination~~ combinations,

b) a further calibration measurement is carried out at an n-fold one-port (n-one-port), which is realized by means of ~~n- known, if appropriate different, impedances (e.g. so-~~

~~called wave terminations with 50 Ω, M = Match),~~ n-known wave terminations (M = Match) which may be different from each other,

c) a further calibration measurement is carried out at an n-one-port, which is realized by means of ~~n unknown~~ n-unknown greatly reflective terminations (R = Reflect), which are similar to short circuits (S = Short),

d) a further calibration measurement is carried out at an n-one-port, which is realized by means of ~~n unknown~~ n-unknown greatly reflective terminations (R = Reflect) which are similar to open circuits (O = Open) and

e) the ~~reflexion~~ reflection accounts of the n-one-ports, which ~~is~~ are realized by means of ~~n unknown~~ n-unknown greatly reflective terminations which are similar to open circuits or to short circuits, are ~~mathematical determinated~~ mathematically determined.

2. (Currently Amended) ~~Method~~A method for calibrating a vectorial network analyser having n measurement ports and at least 2n measurement locations (n>1) by successive measurement of the reflection and transmission parameters at n-1 different two-port calibration standards, which are connected between the measurement ports in any desired order and must all have a transmission path, and three different n-port calibration standards, which are connected between the measurement ports in any desired order and are permitted to have no transmission, by mathematical determination of error coefficients of the network analyser with the 7-term method in the n-1-fold application and measured two-port calibration standards and by

mathematical determination of the scattering matrix $[S_x]$, in which the errors are corrected, with the 7-term method, ~~characterized in that~~ wherein

a) the first n-1 calibration measurements are carried out at a two-port, which is realized by means of the direct connection of the measurement ports (through connection, T = Thru) or a short matched line (L = Line) of known length and attenuation, and which is connected between a reference measurement port and the remaining ports (n-1),

b) a further calibration measurement is carried out at an n-one-port, which is realized by means of ~~n known, if appropriate different, impedances (e.g. so-called wave terminations with 50 Ω, M = Match),~~ n-known wave terminations (M = Match) which may be different from each other

c) a further calibration measurement is carried out at an n-one-port, which is realized by means of ~~n unknown~~ n-unknown greatly reflective terminations (R = Reflect), which are similar to short circuits (S = Short),

d) a further calibration measurement is carried out at an n-one-port, which is realized by means of ~~an~~ n-unknown greatly reflective terminations (R = Reflect) which are similar to open circuits (O = Open) and

e) the ~~reflexion~~ reflection accounts of the n-one-ports, which ~~is~~ are realized by means of ~~n unknown~~ n-unknown greatly reflective terminations which are similar to open circuits or to short circuits, are ~~mathematical determinated~~ mathematically determined.

3. (Currently Amended) ~~Method~~The method for calibrating a vectorial network analyser according to Claim 1, ~~characterized in that~~ wherein

a) n>2 holds true,

b) the further calibration measurement is carried out at a one-port, which is realized by means of a known ~~impedance (e.g. so-called wave termination with 50 Ω, M = Match)~~wave termination (M=Match), instead of at a n-one-port, which is realized by means of ~~n known impedance~~ n-known wave terminations.

4. (Currently Amended) ~~Method~~The method for calibrating a vectorial network analyser according to Claim 2, ~~characterized in that~~ wherein

a) n>2 holds true,

b) the further calibration measurement is carried out at a one-port, which is realized by means of a known ~~impedance (e.g. so-called wave termination with 50 Ω, M = Match)~~wave termination (M=Match), instead of at a n-one-port, which is realized by means of ~~n known impedance~~ n-known wave terminations.

5. (Currently Amended) ~~Method~~The method for calibrating a vectorial network analyser according to Claim 1 or 2, ~~characterized in that~~ wherein the further calibration measurement is carried out at a (n-i)-one-port, wherein i<n, which is realized by a known ~~impedance (e.g. so-called wave termination with 50 Ω, M = Match)~~wave termination (M=Match), instead of at a n-one-port, which is realized by means of ~~n known impedance~~ n-known wave terminations.

6. (Currently Amended) ~~Method~~The method for calibrating a vectorial network analyser according to one of the Claim 1 ~~to 5~~, ~~characterized in that~~ wherein one of the greatly reflective terminations is known.

7. (New) The method for calibrating a vectorial network analyser according to Claim 2 wherein one of the greatly reflective terminations is known.